

# **ATTACHMENT C**

# **SPECIFICATIONS**

**Motor Grader - Articulated Frame**

Motor Grader (Grader), articulated frame steering, new and of current model, equipped as advertised by manufacturer, to meet or exceed the following **MINIMUM** specifications.

Proposed Motor Grader: Make: \_\_\_\_\_ Model: \_\_\_\_\_

**Non-Restrictive Clause:** Any use of brand name or equal within this specification is to be considered a reference for the purpose of describing the standard of quality, performance, and characteristics desired. It is not intended to limit or restrict competition.

**The bidder must respond to each of the following statements.** Specifications listed are **minimum** requirements that must be met for a bidder to qualify for an award. A "YES" response means the bidder guarantees that they meet or exceed the requirement. A "NO" response means the bidder cannot meet the requirement and will not be considered. The bidder must supply printed literature that shows compliance with each requirement of the Specifications and, if on inspection, an item is found not to comply, the Grader will be rejected.

**Descriptive literature shall be furnished to substantiate the details specified throughout this bid.**

**SPECIFICATIONS**

**General:** Six (6) wheels, four-wheel tandem drive, articulated frame

**Comply Yes/No:** \_\_\_\_\_

**Size:** 45,000-pound SAE operating weight without scarifier or wheel weights

Operating Weight (pounds): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Engine:** 250 SAE net horsepower, Water cooled diesel, complete with all standard equipment, oil and fuel filters, heavy duty air cleaner with restriction indicator, pre-cleaner, and electric start. It shall meet the current EPA requirements.

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Displacement (liters): \_\_\_\_\_ Power (horsepower): \_\_\_\_\_

Torque (pound feet): \_\_\_\_\_ Engine Design (inline 6, V8, etc.): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Transmission:** Full power shift having, at least eight (8) forward, and three (3) reverse speeds. No operator clutching required for gear changes

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Type (automatic/manual): \_\_\_\_\_ Forward Speeds: \_\_\_\_\_ Reverse Speeds: \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Differential:** To be equipped with lock-unlock, no-spin, or torque proportioning type

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Type: \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Brakes:**

Service: power actuated, sealed, self-adjusting wet-disc, effective on four (4) tandem wheels.

Parking: independent, mechanical type

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Type (air/hydraulic/etc.): \_\_\_\_\_ Style (disc/drum/etc.): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Steering:**

Front: full hydraulic steering

Rear: hydraulic articulated frame steering

**Comply Yes/No:** \_\_\_\_\_

**Front Axle:** Oscillating axle, left and right hydraulic power wheel lean operated from cab.

**Comply Yes/No:** \_\_\_\_\_

**Wheels:** Six (6) 14-inch interchangeable rims sized to meet machine needs.

Size: \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Tires:** Six (6) 14.00 x 24, 10-ply, G-2 ground grip on all wheels with 14-inch interchangeable rims

Size: \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Electrical:** 55-amp alternator, 12-volt maintenance free battery, 950 CCA at zero degrees Fahrenheit.

**Alternator:**

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Rating (amps): \_\_\_\_\_

Battery:

Make: \_\_\_\_\_ Model: \_\_\_\_\_

Power (CCA): \_\_\_\_\_

Comply Yes/No: \_\_\_\_\_

Frame: An average weight of 78-pounds per foot

Comply Yes/No: \_\_\_\_\_

Fuel System: 100-gallon tank capacity (any configuration) dual stage fuel filters.

Number of tanks: \_\_\_\_\_ Capacity per tank (gallons): \_\_\_\_\_

Comply Yes/No: \_\_\_\_\_

DEF Tank: 6-gallon, frame-mounted

Number of tanks: \_\_\_\_\_ Capacity per tank (gallons): \_\_\_\_\_

Comply Yes/No: \_\_\_\_\_

Controls: Full hydraulic, controlled from the operator's cab

Comply Yes/No: \_\_\_\_\_

**Moldboard & Blade:** Full-hydraulic control including circle side-shift, blade side-shift, circle rotation, saddle rotation, blade pitch, and blade float, 90-degree left or right bank cutting angle, blade to be 14-feet wide, 22-inch height, 0.75-inch blade thickness equipped with renewable overlay end bits and shall have boron steel or equal cutting edges for increased wear resistance. Cutting edges to be guaranteed against breakage

Moldboard/Blade Width (feet and inches): \_\_\_\_\_

Blade height (inches): \_\_\_\_\_

Blade thickness (inches): \_\_\_\_\_

Blade Material Composition: \_\_\_\_\_

Comply Yes/No: \_\_\_\_\_

**Cab:** Coupe type, fully enclosed, shatterproof glasses, All standard equipment including, but not limited to: deluxe high-back air suspended driver seat with armrest, two (2) cup holders, high-visibility orange safety belts, factory air conditioning and heater with defroster, outside assist handles both sides (if exhaust is in the way then an inside assist handle will be acceptable for the side affected), 12-volt accessory power outlet, direct reading gauges for engine oil pressure, engine water temperature, transmission oil temperature, fuel level, tachometer, AM/FM Bluetooth stereo radio with hands-free option, horn, RH and LH mirrors, RH and LH convex auxiliary mirrors, tinted glass all around, multi-speed electric windshield wipers and washers with intermittent mode front and rear, tilt steering column,

There shall be a holder for the operator's manuals.

Comply Yes/No: \_\_\_\_\_

**Back-up Alarm:** Smart, self-adjusting alarm system which is activated upon engagement of the reverse gear of the vehicle, is audible above normal outdoor sounds, and meets FMVSS requirements. The back-up warning alarm shall be mounted on the rearmost part of the vehicle, be protected from water and road spray, and meet a minimum 82 dB up to 107 dB depending on surrounding ambient noise levels.

**Comply Yes/No:** \_\_\_\_\_

**Accessories:** Vocational-duty drawbar or tow hitch, hour meter, stop, turn and tail-lights, flashing signals, work lights, engine side-shields, standard toolbox with hinged cover, transmission bottom cover, starting aid, all necessary tools, slow moving vehicle emblem, vandalism protection group.

**Comply Yes/No:** \_\_\_\_\_

**Paint:** Manufacturer's standard color

**Comply Yes/No:** \_\_\_\_\_

**ADDITIONAL REQUIREMENTS**

**Service:** The Grader shall be delivered fully assembled and ready to operate. Factory-trained dealer representative is to inspect the Grader upon delivery and provide receiving MDOT equipment manager with information on operational, service, and maintenance requirements.

Bidder shall maintain a representative inventory of replacement parts and service facilities as well as all necessary diagnostic tools/equipment/software and software licenses needed for diagnosis, repair, service, and maintenance.

**Acknowledge Yes/No:** \_\_\_\_\_

**Warranty:** Clearly stated terms and conditions of all manufacturer warranties shall be included with the bid package. All materials, specialty equipment, or accessories that prove defective in normal operation within the warranty period shall be replaced or repaired by the manufacturer free of all cost to MDOT, including all material, labor, and transportation costs. Warranty replacement and/or repairs shall be furnished promptly by the successful bidder within a time not to exceed thirty (30) calendar days. **The bidder shall provide written assurance with the bid package regarding warranty repairs.**

The delivering dealer will have sole warranty responsibility (**all components**) for the first ninety (90) calendar days after acceptance of equipment.

The manufacturer shall provide, with the bid package, a list of warranty service locations within the State of Mississippi for all components of the Grader (body, chassis, electrical, etc.) which may need warranty repair beyond the first ninety (90) calendar days.

**Acknowledge Yes/No:** \_\_\_\_\_

**Workmanship:** Workmanship throughout shall conform to the highest standard of commercially accepted practice for the class of work and shall result in a neat and finished appearance. The design which the manufacturer proposes must be of substantial and durable construction in all respects.

All parts shall be new. Used, reconditioned, or obsolete parts will not be accepted.

**Acknowledge Yes/No:** \_\_\_\_\_

**Parts Availability:** Dealer name and contact information located closest to the point of delivery:

Dealer Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Acknowledge Yes/No: \_\_\_\_\_

**Tests and Testing:** The complete Grader and all working and moving parts and operating devices shall be thoroughly tested and put in operating condition by the manufacturer.

Prior to acceptance by MDOT, the manufacturer shall service and adjust the unit for operation.

Acknowledge Yes/No: \_\_\_\_\_

**Literature:**

**Technical manuals:** Operator's manual, service/maintenance manual, and parts book are to be made available in both hard copy and electronic (PDF file format on USB flash drive) versions. One set of technical manuals shall be provided with each Grader upon delivery. Additional manuals may be ordered later.

**Technical service bulletins:** Successful bidder shall provide TSBs (technical service bulletins) for all Grader(s) delivered to MDOT as they are published, regardless of the date of delivery. TSBs may be furnished in paper or electronic format and shall be updated regularly.

The following additional information shall be provided by the vendor at time of delivery (electronically if possible):

- Manufacturer's recommended service/preventive maintenance intervals
- Recommended fluids, lubricants, and their SAE equivalents

**Two (2) copies of descriptive literature shall be furnished to substantiate the details specified in the bid.**

Acknowledge Yes/No: \_\_\_\_\_

**Certification:** The manufacturer(s) shall furnish certification that the Grader meets or surpasses current U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Regulations, U.S. Department of Transportation Federal Motor Vehicle Safety Standards (FMVSS), and any other applicable Federal regulations.

Acknowledge Yes/No: \_\_\_\_\_

**Title or Certificate of Origin:**

**Assignment:** State of Mississippi/DFA – 941

**Mailing address:** Mississippi Department of Transportation, 9301  
P.O. Box 1850  
Jackson, MS 39215

Acknowledge Yes/No: \_\_\_\_\_

**Lienholder:** Upon award, if MDOT issues a **Notice to Proceed** instead of a **Purchase Order**, the Grader is being purchased through the State's Master Lease Purchase Program.

Acknowledge Yes/No: \_\_\_\_\_